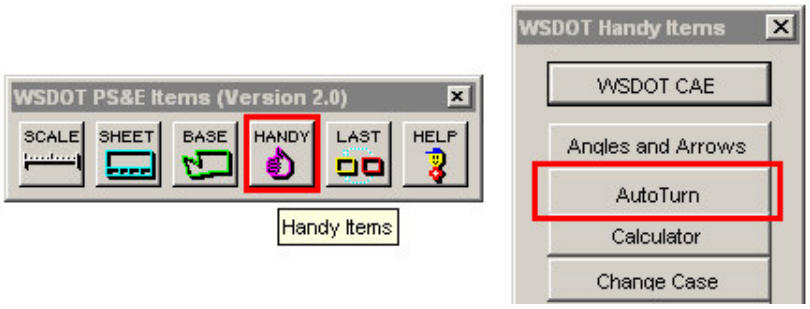
AutoTURN

AutoTURN is a separate application that is run inside of MicroStation to simulate low speed turning maneuvers of several types of Standard Design Vehicles. This allows MicroStation users to test turning radii of intersections inside of their basemaps.

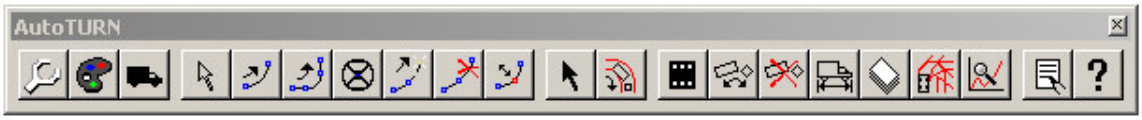
Using AutoTURN

Press the "AutoTurn" button on the "Handy Items" menu (shown below) to have AutoTURN installed onto your machine**.** After initial installation The "AutoTurn" button will then run AutoTURN locally on your machine. This Program should run well even in offices with slower networks connections, because it is run locally.

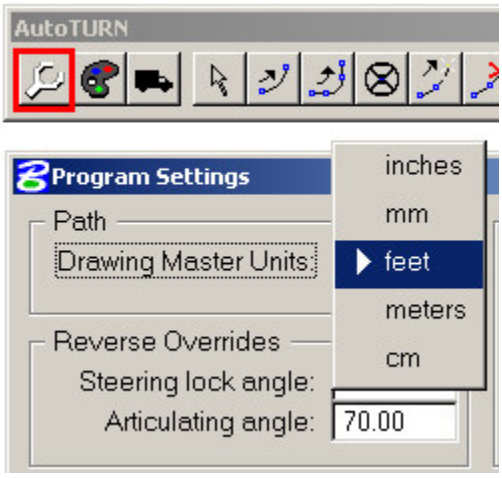


IMPORTANT: For AutoTURN to function in your design environment, you will need to switch your default tool to "Selection" by choosing workspace, preferences, Look and Feel, and choosing "Selection" for your Default Tool.

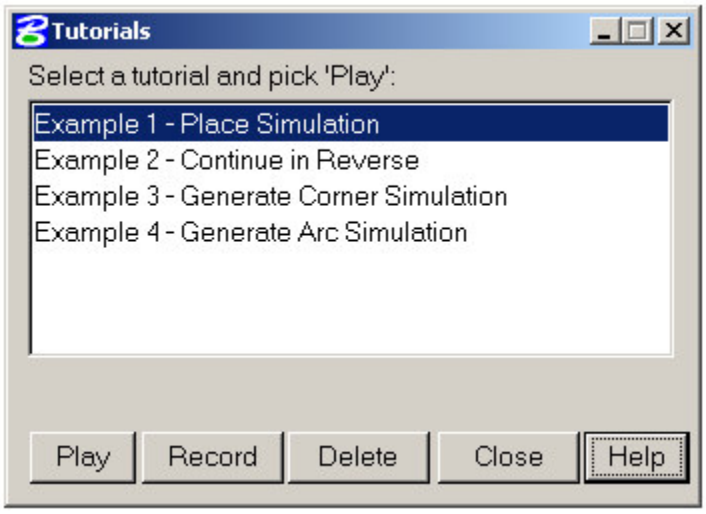
The tool bar below is all you will need to use AutoTURN.



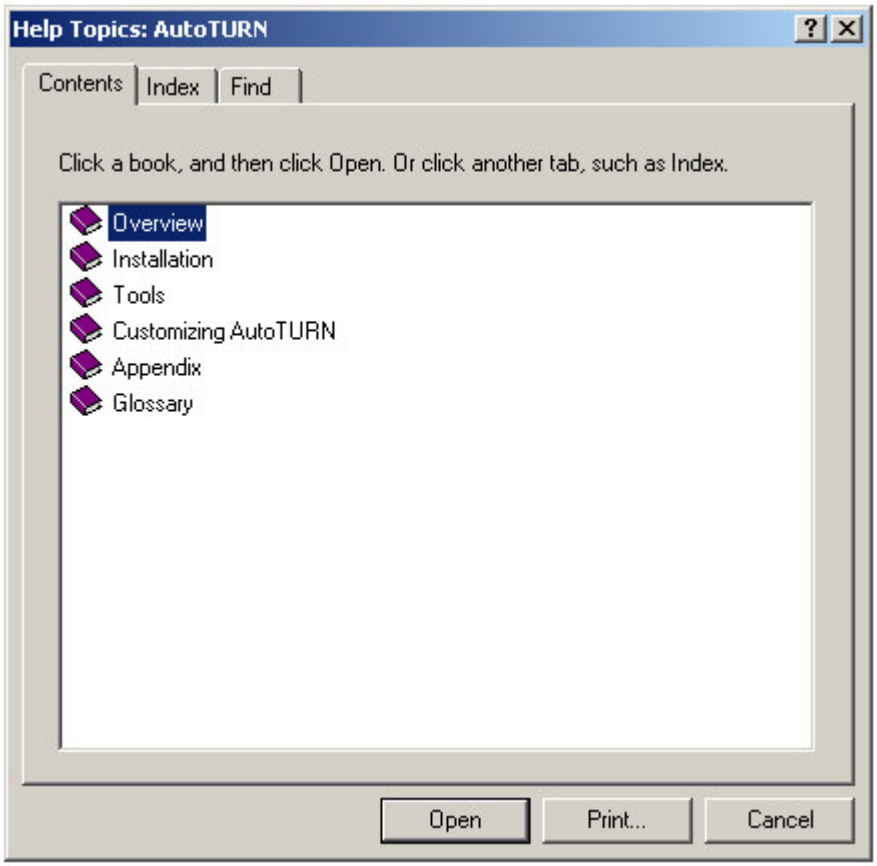
AutoTURN works in English or Metric workspace but you will need to set your master units by pressing the "Program Settings" button shown below. AutoTURN should usually be run in your basemap because it uses the true dimensions of your roadway. For Example in your sheet file that is referenced at a 2:1 your vehicle would be half the size compared to if you placed a vehicle in a design file that is at a 1:1 scale.



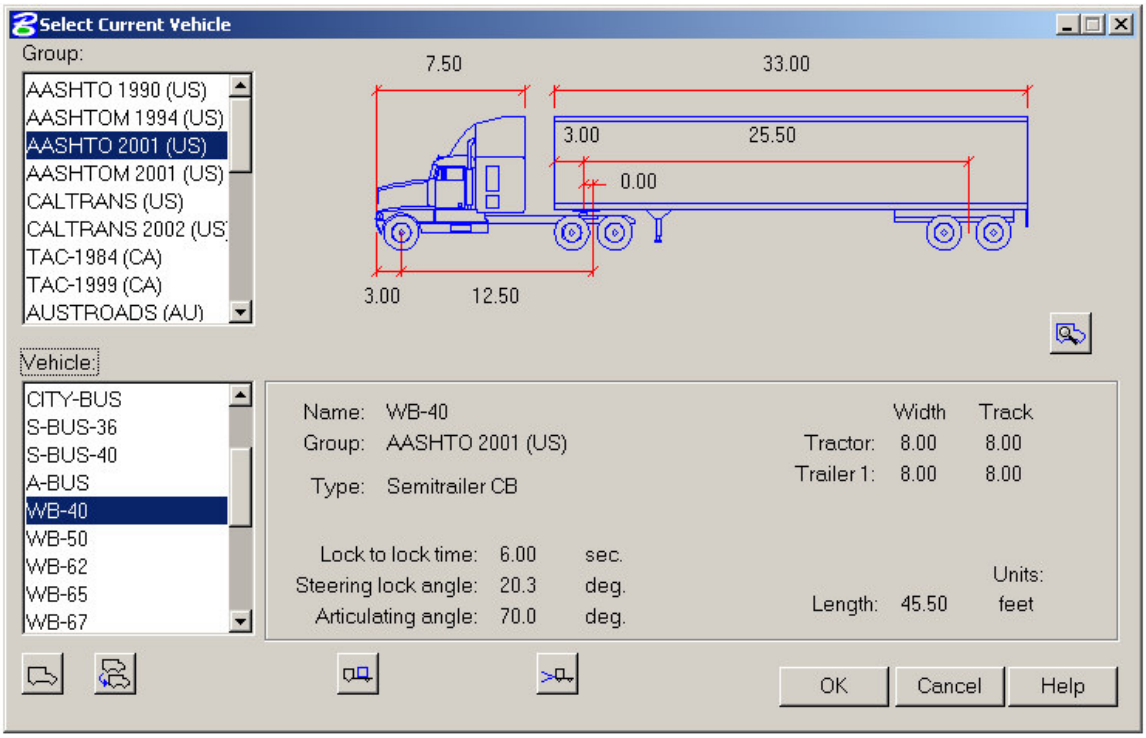
There are tutorials available by pushing the  button:



Help can be accessed by pressing the  button:

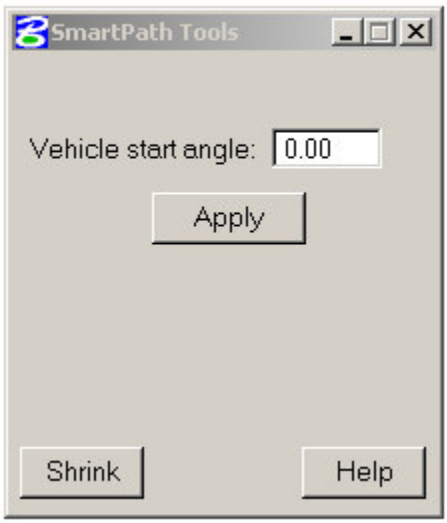


Before you begin your turning simulation, press the  button to select the vehicle type, choose the desired vehicle type, and press OK.

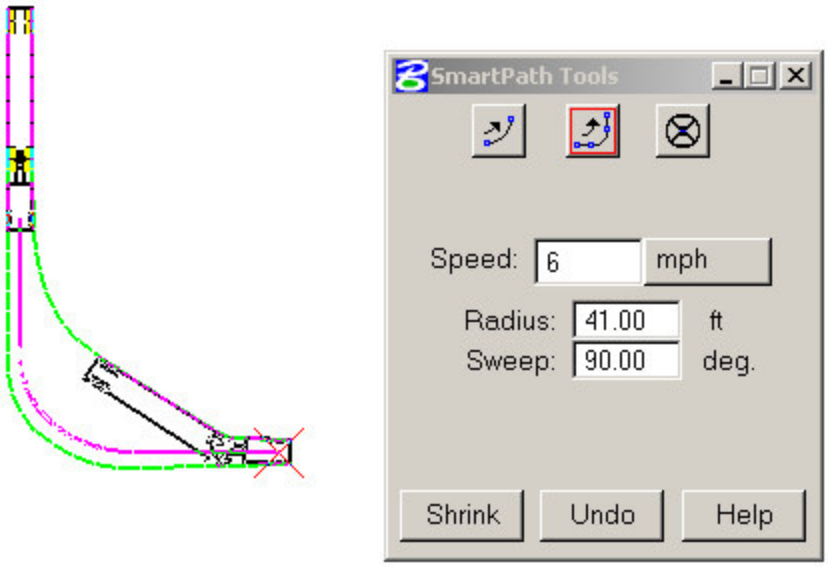


Method 1: Placing Simulation With No Known Turning Path.

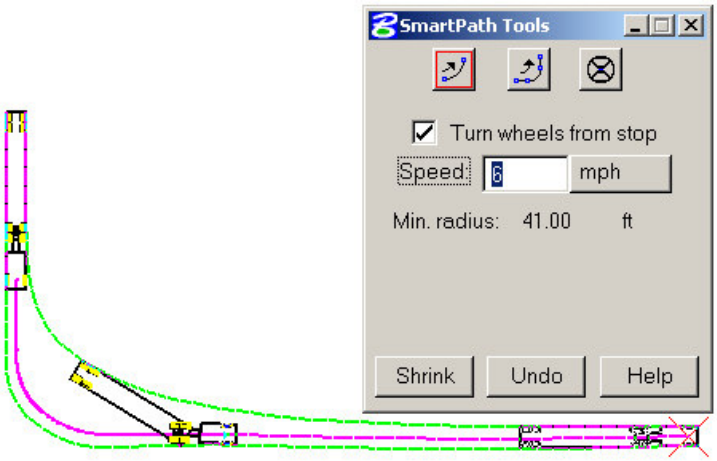
1. To place a turning maneuver simulation, press the  button and click your mouse at the beginning of your turning movement to place your vehicle. Then move your mouse around using the "X" for guidance to choose your vehicle angle, and click the mouse when you have chosen the desired angle.



2. Once your vehicle is at the desired angle, you will need to select the  tool below and move your mouse in the direction you would like to turn. Click the vehicle into place at about the point that the front of your vehicle is straitening out. (AutoTURN will not let you place a turn simulation that is less than the minimum turning radius for that vehicle and speed.)



3. You will then need to choose the  tool below to continue your vehicle in a relatively straight path and click your mouse when you have cleared the end of the turn with your entire vehicle.

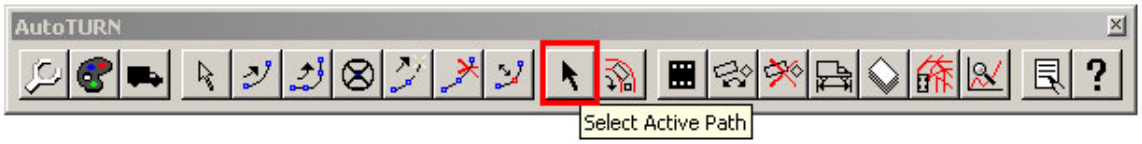


4. When the vehicle is placed to your satisfaction, press the  run animation button and watch the vehicle follow the path.

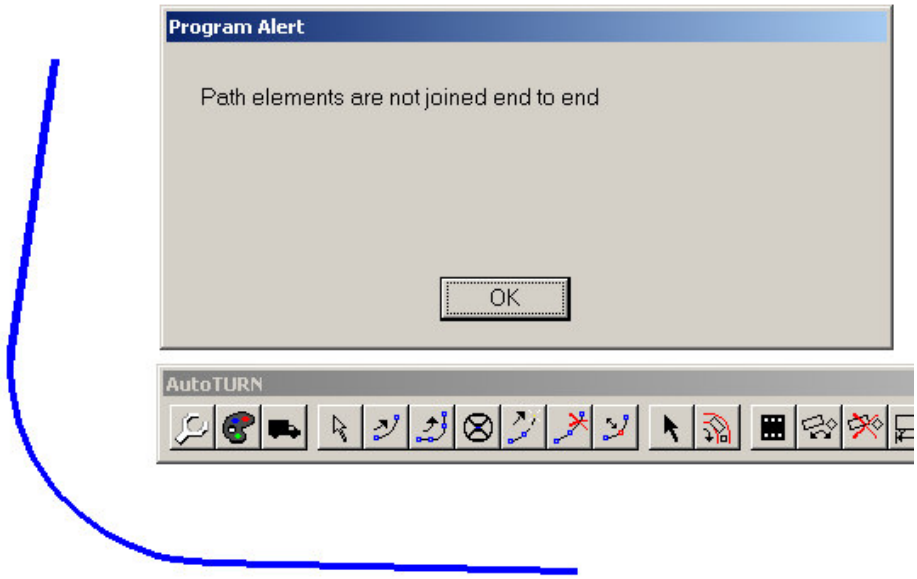
Method 2: Placing Simulation on a Known Turning Path.

You can create a known turning path by copying a line parallel to the center of the lane you are testing, or create a turning path in your intersection that you feel would meet the minimum requirements for the vehicle you are testing.

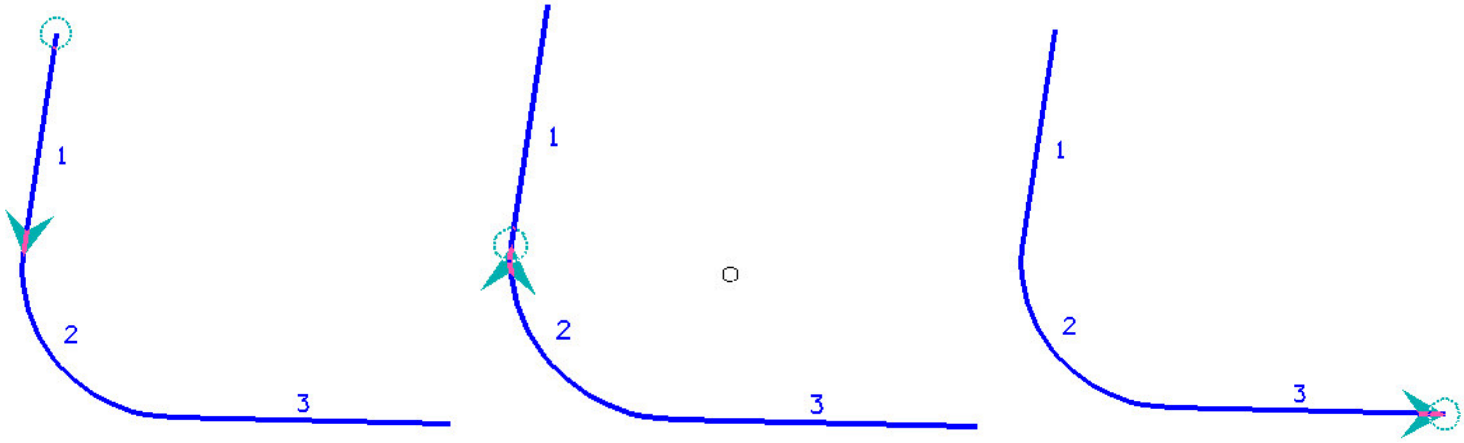
1. Choose Select Active Path and touch the desired turn path.



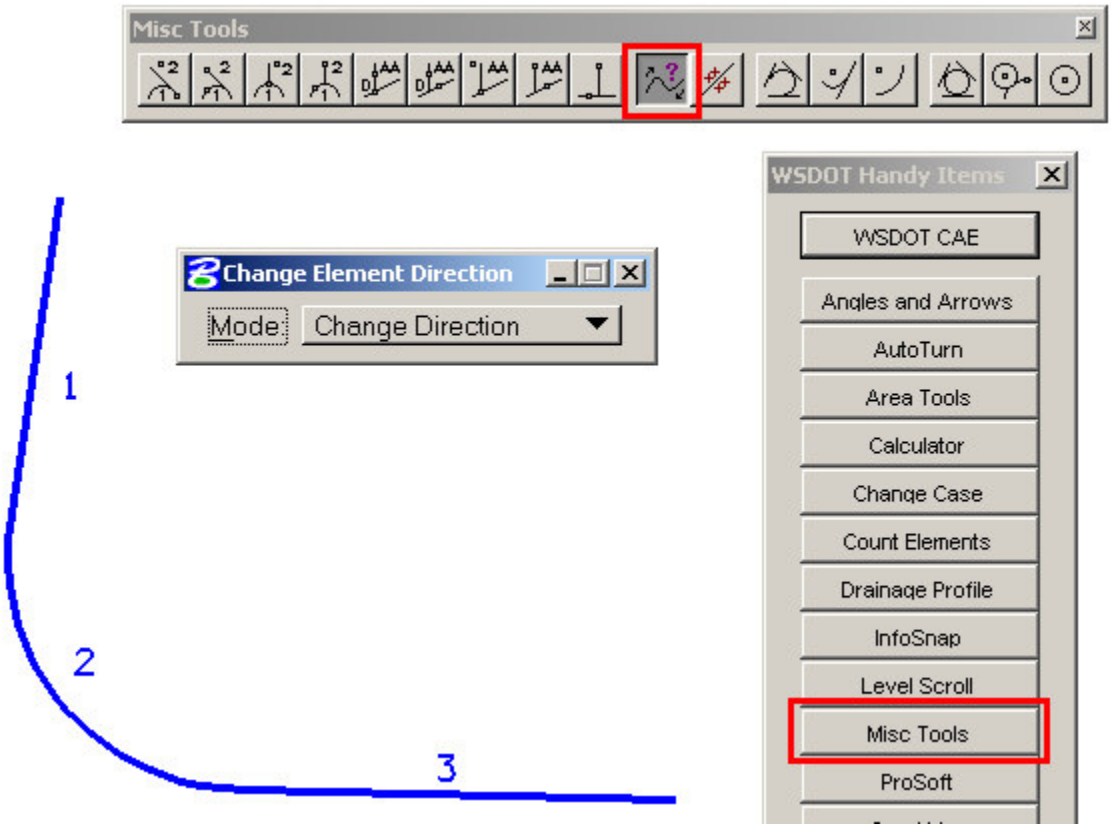
2. If your turning path is not one complex chain or element, or is not in the correct sequence you may get a Program Alert.



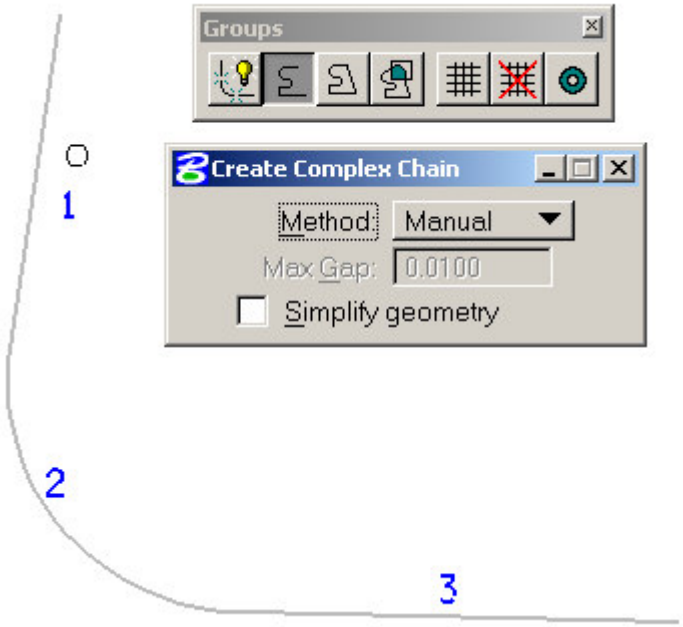
3. If you get this Program Alert, use the select active path tool to by touching each element of your path to verify which element is drawn in the wrong direction. In the picture below element number 2 is not drawn in the same direction as elements 1 and 3.



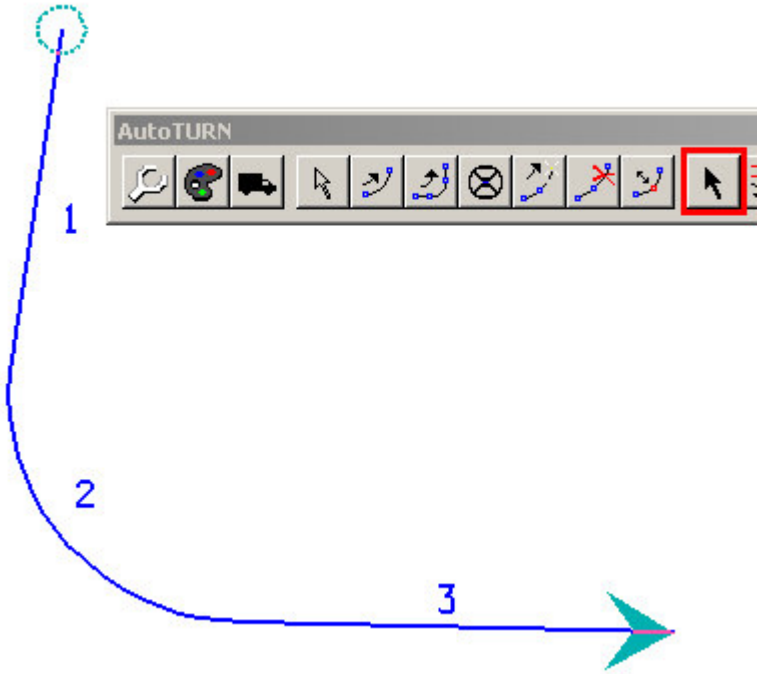
4. To reverse an elements direction you must use the Misc Tool “Change Element Direction” shown below that can be found on the WSDOT Handy Items menu.



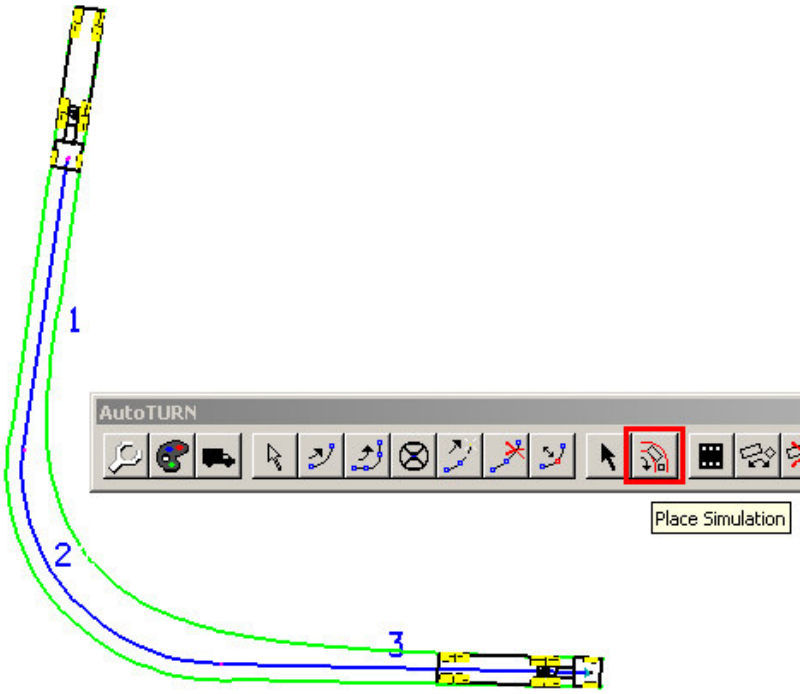
4. After all of your elements are going in the correct direction and verified with the select active path tool, create a complex element out of your turning path elements.



5. Press the “Select Active Path” button below and left click on your turning radius element. (A complex element when selected by the select active path tool is shown below.)



6. Press the Place Simulation button shown below and press the Run Animation button  to view your turning movement.



Note: If you try to place a simulation that has a radius that is less than the minimum allowable turning radius you will get a picture like this: